

best practices

The Partograph: An Essential Tool for Decision-Making during Labor

The partograph is a vital tool for providers who need to be able to identify complications in childbirth in a timely manner and refer women to an appropriate facility for treatment.

Prolonged labor is a leading cause of death among mothers and newborns in the developing world. It is most likely to occur if a woman's pelvis is not large enough for her baby's head to pass through or if a woman's uterus does not contract sufficiently. If her labor does not progress normally, the woman may experience serious complications such as obstructed labor, dehydration, exhaustion, or rupture of the uterus. Prolonged labor may also contribute to maternal infection or hemorrhage and to neonatal infection.

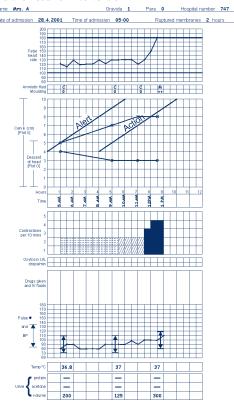
Skilled management of labor using a partograph, a simple chart for recording information about the progress of labor and the condition of a woman and her baby during labor, is key to the appropriate prevention and treatment of prolonged labor and its complications. Following the recommendation of the World Health Organization (WHO), the Maternal and Neonatal Health (MNH) Program promotes the use of the partograph to improve the management of labor and to support decision-making regarding interventions. When used appropriately, the partograph helps providers identify prolonged labor and know when to take appropriate actions.

History of the WHO Partograph

The normal pattern of labor, including two phases (latent and active) of cervical dilation, was first documented on a graph in the 1950s. In the 1960s and 1970s, further research helped to chart the progression of labor and to build a scientific basis for interventions to prevent prolonged labor. These early partographs formed the foundation for the WHO model of the partograph, which was developed as an international standard in 1988 following the launch of the worldwide Safe Motherhood Initiative.

In 1990–1991, to evaluate the impact of the new partograph, WHO conducted a multicenter trial involving more than 35,000 women in Indonesia, Malaysia, and Thailand. The study showed that when the partograph was introduced into clinical practice along with a management protocol, labor outcomes were greatly improved. Use of

Sample partograph indicating prolonged labor and the need for intervention



Source: Maternal and Neonatal Health (MNH) Program. 2002. MNH Program Evaluation of MNH Clinical Training for Service Providers. MNH Program: Baltimore, MD. Draft.

the partograph reduced the number of prolonged labors (those longer than 18 hours), the need for augmentation of labor with oxytocin, rates of cesarean section, and the incidence of infection. As a result of this study, WHO recommended that the partograph be used in monitoring all labors to help identify abnormal progress and women who might need further interventions.

How the Partograph Works

The partograph is a printed graph representing the stages of labor. Once a woman is in active labor, the skilled provider regularly plots the descent of the baby as well as the dilation of the woman's cervix to help keep track of

whether the woman's labor is progressing normally and identify when intervention may be needed. In addition, the provider records details about the condition of both mother and fetus, including the fetal heart rate, the color of the amniotic fluid, the presence of molding, the contraction pattern, and the medications that have been given to the woman.

Already plotted on each printed partograph are an alert line and an action line. The alert line is plotted to correspond with the onset of the active phase of labor (dilation of the cervix to 4 centimeters). When the woman's cervix reaches 4 centimeters, the provider should expect dilation to continue at about the rate of 1 centimeter per hour. The action line is plotted 4 hours after the alert line. If the woman's labor is not following the expected course after 4 hours, the plot of her labor will begin to approach the action line, signaling the need to take action. Interventions that may be appropriate when the action line is crossed include the use of oxytocin to augment labor, vacuum-assisted birth (if the cervix is fully dilated), or cesarean section.

An Aid in Clinical Decision-Making

Having a visual representation of the conditions of both mother and fetus helps providers determine whether and when to intervene if labor is not progressing normally. Every time data is plotted on the graph, the provider should be thinking, "Is this what should be happening at this point?" If the answer is yes, the provider should think ahead to what to expect in the next 2 to 4 hours. If the answer is no, the provider must consider what to do to address the woman's condition. In this way, use of the partograph helps providers ensure that women are being carefully monitored during labor, avoid unnecessary interventions, and recognize and respond to complications in a timely manner.

Importance of Protocols

The partograph gives providers objective data on which to base their clinical decisions and enhances communication among members of the team of providers who are caring for the mother, so that decisions can be made in a timely manner. The partograph is of little use, however, without management protocols that give clear directives about what actions should be taken at what point.

Each hospital and healthcare setting needs a set of rules to guide decision-making in that setting, so that providers know what actions to take when the partograph shows that a woman needs additional care. Providers in peripheral settings, for example, may need to refer a woman to a center capable of performing oxytocin augmentation and cesarean section. Protocols should address issues such as when and what action should be taken, when referrals should be made, and the procedure for referrals.

MNH Program Responds to Need for Training

Despite the WHO recommendation that it be used to monitor all labors, the partograph is still not widely used in Africa or elsewhere in the developing world. In many countries where it has been mandated without proper training, the partograph serves only as a record of labor (completed after the baby is born) and not as a tool to guide decision-making during labor. In addition, skilled providers often feel that completing the partograph is an additional time-consuming task, and they do not always understand how it can save women's lives.

Competent use of the partograph can save lives by ensuring that labor is closely monitored and that life-threatening complications such as obstructed labor are identified and treated. Competency requires that a provider is capable of attending a normal labor and birth, performing abdominal examinations to determine fetal descent and vaginal examinations to determine cervical dilation, and plotting this information on a graph.

To help providers learn to use the partograph effectively, the MNH Program includes the partograph in its training programs for doctors and midwives. Participants learn about the evidence basis for the use of the partograph in their knowledge update course and then use the partograph in practice during their clinical skills standardization course. They also review completed partographs each day, using them as case studies in clinical decision-making.

Often, participants plan to introduce the appropriate use of the partograph in their own clinical sites after they complete their training. During followup visits, MNH Program staff assess the participants' progress toward this goal.

Garnering National Support

In addition to providing training in the effective use of the partograph, the MNH Program is actively involved in national-level policy efforts to encourage the adoption of the WHO partograph as a national standard. These efforts are central to improving clinical practices, since the adoption of management guidelines within healthcare facilities often evolves from the standards set at the national level. Highlights of activities in 2002 include the following:

- MNH/Burkina Faso supported the Ministry of Health in conducting a national workshop leading to the adoption of the WHO partograph as a standard for the entire country.
- In Zambia, the MNH Program has assisted in the revision and testing of the national registered midwifery curriculum, which includes use of the partograph as a required competency.
- In Indonesia, the WHO partograph was incorporated into the country's "PocketGuide," an adaptation of the international standards set out in Managing Complications in Pregnancy and Childbirth.
- MNH/Nepal assisted the National Health Training Center with finalizing an inservice training curriculum for auxiliary nurse-midwives, which will include the WHO partograph.

For more information about the MNH Program visit our website: www.mnh.jhpiego.org

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